

LAW OFFICES
MAHON & PATUSKY
CHARTERED

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WILLIAM A. MAHON
J.D., N.Y. MASS. AND ILL. BARS

CHRISTOPHER PATUSKY
J.D., N.Y. MASS. BARS

735 CONNECTICUT AVENUE, N.W., THIRD FLOOR
WASHINGTON, D.C. 20009
TEL: (202) 483-4000
FAX: (202) 483-4006

19 WEST 21ST STREET, SUITE 901
NEW YORK, N.Y. 10010

11 TUCKERNUCK AVENUE
POST OFFICE BOX 1695
OAK BLUFFS, MASS. 02557

August 21, 1995

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AUG 22 1995

**FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY**

Office of the Secretary
Federal Communications Commission
1919 M Street, N.W.
Washington, D.C. 20554

Re: Comments of Mahon & Patusky, Chartered to In the Matter
Amendment of the Commission's Rules Concerning Low Power
Radio and Automated Maritime Telecommunications System
Operations in the 216-217 MHz Band -- RM-7784

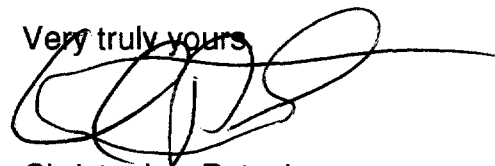
Dear Secretary:

We filed Comments on Friday, August 18, 1995, and just noticed that the Comments contain three slight typographical errors. The errors are in Footnotes 1, 4 and 5 and all involve the same mistake: the absence of "See, e.g.," at the beginning of each footnote and a period replacing a semi-colon at the end of the footnote.

Attached are one original and nine copies of these Comments that correct these inadvertent errors.

Thank you.

Very truly yours,



Christopher Patusky

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BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554

AUG 22 1995

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

In the Matter of Amendment of the Commission's)
Rules Concerning Low Power Radio and Automated) RM-7784
Maritime Telecommunications Systems Operation)
in the 216-217 MHz Band)

REPLY COMMENTS OF MAHON & PATUSKY, CHARTERED

Mahon & Patusky, Chartered ("MPC") respectfully files these Reply Comments on behalf of a multinational corporation that manufactures high-performance electronic devices and that carries out an active research and development program in the field of auditory assistance devices. The Comments filed in these proceedings are consistent with MPC's request that the Commission initiate a further, related rulemaking that allocates spectrum in the 400 MHz range in addition to the proposed allocation in the 216-217 MHz range.

The Comments underscore the need for the Commission to adopt a spectrum strategy with respect to auditory assistance devices that calls for (1) policing of the 72-76 MHz band to ensure that interference is reduced and controlled so that existing systems remain useable, (2) immediate allocation of the 216-217 MHz band to meet the large unsatisfied need for spectrum for currently available technology, and (3) the immediate institution of a further Notice of Proposed Rulemaking to allocate spectrum in the 400 MHz range to accommodate the use of the next generation of auditory assistance technology that will become available in 1996.

Consistent with the dictates of the Americans With Disabilities Act of 1990 (“ADA”), the Commission must adopt a comprehensive strategy to satisfy its obligations and to promote the public interest in aiding the large body of citizens who are hearing impaired and who are unable to fully participate in and contribute to society simply because the lack of spectrum constricts their use of available and soon to be available technologies. Rather than address this problem in a piecemeal manner, the Commission must look ahead to spectrum in the 400 MHz range to satisfy both present and future needs.

I. THERE IS BROAD CONSENSUS THAT THE ALLOCATION OF SUFFICIENT ADDITIONAL SPECTRUM FOR AUDITORY ASSISTANCE DEVICES IS IN THE PUBLIC INTEREST

The Commission and nearly all of the Comments contend that the allocation of additional spectrum for auditory assistance devices serves the public interest.¹ This unsatisfied need is described in the Comments filed by Self Help for Hard of Hearing People, Inc. (“SHHH”) which state that “26 million people who are hard of hearing in the U.S. in their daily lives” will benefit from new interference-free allocations. Phonic Ear’s Petition points out that the ADA further requires accommodations for disabled persons and specifically requires certain privately owned facilities to install “auxiliary aids and services” which include “effective methods of making aurally delivered materials available to individuals with hearing impairments.”²

¹ See, e.g., *Amendment of the Commission’s Rules Concerning Low Power Radio and Automated Maritime Telecommunications System Operation in the 216-217 MHz Band*, Notice of Proposed Rule Making, WT Docket NO. 95-56, FCC 95-174 (May 16, 1995) [“Notice”]; Phonic Ear Petition; Comments of SHHH at 1-3; Comments of Pronet, Inc. at 2-3; Comments of Orion at 1-2; Comments of SEA, Inc. at Appendix A.

² See Phonic Ear Petition at 2 and n. 2.

House Bill H.R. 1869 would require the Commission to report to Congress within six months of enactment “on the existing and future use of the FM band to facilitate the use of auditory assistive devices for individuals with hearing impairments. In preparing such report, the Commission shall consider [among other things]alternative frequency allocations that could facilitate such compliance.”³ Therefore, the question is not whether spectrum should be allocated but how quickly adequate spectrum can be allocated and cleared of interfering uses.

In order to achieve the mandates of the ADA and to meet the obligations that will likely be imposed by Congress, the Commission should adopt the spectrum strategy outlined above in order to meet both current *and future* demand for auditory assistance technology. Any other approach will fall short as merely a stopgap measure that will not serve the public interest in the long term. It is time for the Commission to recognize that hard of hearing Americans deserve a better spectrum solution for the next generation of advanced auditory assistance devices.

II. THE COMMISSION’S ADOPTION OF A GLOBAL SPECTRUM STRATEGY FOR AUDITORY ASSISTANCE DEVICES WILL MINIMIZE INTERFERENCE PROBLEMS

The commentators also agree that the primary obstacle to establishing an effective regime of spectrum allocation for auditory assistance devices is *interference from other devices*. As noted in several of the Comments, interference generated by the proliferation of both new and previously existing devices has

³ H.R. 1869, 104th Cong., 1st Sess. §14 (1995).

seriously reduced the usefulness of auditory devices operating in the 72-76 MHz band.⁴

Many of the Comments acknowledge that the same degradation can occur in the 216-217 MHz band unless the spectrum is effectively allocated to prevent such interference.⁵ For instance, the NVNG MSS Little LEOs have sought allocation of spectrum in the 216 MHz range and it is likely that such an allocation would not be compatible with the Low Power Radio Service allocation proposed by the current rulemaking.⁶

The Little LEOs are similarly seeking spectrum in the 400 MHz range. The Commission must act now to allocate additional spectrum both to satisfy existing demand and to meet the 400 MHz range requirements of advanced auditory assistance devices. Whereas low earth orbit satellites have numerous frequency allocations available, up through 2000 MHz and beyond, America's nearly 30 million hard of hearing citizens lack even a single primary frequency allocation. Such a situation is inconsistent with the fundamental principles of spectrum management described in our Comments in this proceeding. The commencement of a further notice of proposed rulemaking to establish an advanced auditory assistance device allocation in the 400 MHz range will help to establish a global

⁴ See, e.g., Phonic Ear Petition at 7; Comments of SHHH at 2-4, 7.

⁵ See, e.g., Comments of SHHH at 3-4, 7; Comments of Williams Sound Corp. at 1-3; Comments of ProNet at 3-4; Comments of Multimedia WMAZ, Inc. at 2-4; Comments of Waterway Communications at 2-3.

⁶ See Comments of Pronet, Inc. at 3-5 (ProNet's preliminary research "suggests that the relatively high-power, wide coverage area Little LEO feeder downlinks would cause debilitating and unacceptable interference to law enforcement tracking systems and auditory assistance devices of ProNet and Phonic Ear.")

spectrum strategy that is consistent with the Commission's time-honored spectrum management principles.

III. THE CURRENT RULEMAKING PROCEEDINGS DO NOT PROVIDE FOR THE UTILIZATION OF NEW AND ADVANCED TECHNOLOGY

Most importantly, the current rulemaking, while satisfying an important need, fails entirely to provide for the utilization of the next generation of technology which is already in advanced development. The 216-217 MHz allocation suffers from deficiencies that will likely not apply to the 400 MHz range allocation. For instance, several Comments acknowledged that the 25 KHz per channel limitation contemplated by the current rulemaking will not be adequate to provide certain services and will certainly not provide high quality sound capabilities.⁷

In addition, the physics of electromagnetic communications will enable much smaller and less observable hearing aid devices at 400 MHz than at 216-217 MHz or 72-76 MHz. This is a very important consideration for both hard of hearing youth and for the burgeoning numbers of hard of hearing "baby boomers."

Also, as noted above, there remains a substantial likelihood of electromagnetic pollution in the 216-217 MHz band, either from other low power

⁷ Comments of Williams Sound Corp. at 2 ("With current technology, signal to noise ratio, frequency response, and overall fidelity may be compromised with only 25 KHz separation between channels. For purposes of auditory assistance, a high fidelity signal is important for intelligibility purposes"); Comments of Sea, Inc. at Appendix A, p. 1 ("SEA notes that a significant technical difficulty exists with this application. Any application which requires medium-to-high fidelity audio performance is not suitable for the 25 KHz channel plan currently employed in the 216-217 MHz band. This application requires 200 KHz wide

devices or from other co-primary services. While this pollution will hopefully not approach the deleterious levels prevailing in the 72-76 MHz band, it nevertheless is less than the hard of hearing deserve. In the Comments of the Association for Maximum Service Television, Inc., (AMST) a strong plea was made to protect television channels 10 and 13 from harmful interference originating from new devices in the 216-217 MHz band. MPC shares the concerns of AMST with respect to auditory assistance devices. Further, just as the television broadcasting industry has received new frequency allocations for advanced technology such as Direct Broadcast Satellites, the hard of hearing deserve new frequency allocations for advanced auditory assistance devices.

Finally, it is clear that the 216-217 MHz allocation is structured primarily for fixed-site auditory assistance technology, such as would be deployed in theaters, movie houses, sports arenas and classrooms. New 400 MHz region technology is designed for more personalized, "go anywhere" auditory assistance. The hard of hearing citizens of the 1990s are active, mobile people, with national and even global travel itineraries. The narrow 216-217 MHz band, subdivided among other uses and limited to the United States, cannot realistically meet the demands of personal and mobile auditory assistance technology. The substantial proportion of the public which is hard of hearing has the right to expect a fair share of the radio spectrum in support of their advanced auditory assistance requirements. This spectrum will need to come from the 400 MHz region.

channels, such as those used by FM broadcast services, to achieve a reasonable level of audio fidelity.") See also Comments of SHHH at 6.

CONCLUSION

MPC agrees with the Commission's proposal to allocate a portion of the 216-217 MHz band for auditory assistance devices. But with the approach of the next generation of auditory assistance technology, and the rapid growth of active, mobile hard of hearing persons, MPC also urges the Commission to implement immediately a further rulemaking proceeding seeking an allocation of spectrum in the 400 MHz range for advanced auditory assistance devices. Such a strategy is entirely consistent with the current proceedings, is mandated by the ADA and is a fair allocation of the public's spectrum resource to meet the needs of millions of hard of hearing persons.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read 'Christopher Patusky', written over a horizontal line.

Christopher Patusky, Esq.
Mahon & Patusky, Chartered
1735 Connecticut Avenue, 3rd Floor
Washington, D.C. 20036
(202) 483-4000

August 18, 1995

I, Paul A. Mahon, hereby certify that a copy of the foregoing REPLY
COMMENTS OF MAHON & PATUSKY, CHARTERED was sent by first class mail, postage
prepaid, this 18th day of August, 1995 to the following:

Brenda Battat
Deputy Executive Director
Self Help for Hard of Hearing People, Inc.
7910 Woodmont Avenue, Suite 1200
Bethesda, MD 20814

Peter Tannenwald, Esq.
Mitchell Lazarus, Esq.
Arent, Fox, Kintner, Plotkin & Kahn
1050 Connecticut Avenue, N.W.
Washington, D.C. 20036
Counsel for Phonic Ear, Inc.

Thomas J. Keller, Esq.
Verner, Liipfert, Bernhard, McPherson
and Hand, Chartered
901-15th Street, N.W.
Suite 700
Washington, D.C. 20005
Counsel for Sea, Inc.

Todd Bergum
Williams Sound Corp.
10399 West 70th Street
Eden Prairie, MN 55344-3459

Danny E. Adams, Esq.
Wiley, Rein & Fielding
1776 K Street, N.W.
Washington, D.C. 20006
Counsel for ProNet Inc.

Dennis C. Brown, Esq.
Brown & Schwaninger
1835 K Street, NW, Suite 650
Washington, DC 20006
Counsel for Orion

Martin Bercovici
Keller & Heckman
1001 G Street, NW Suite 500W
Washington, DC 20001
Counsel for Waterway Communications System, Inc.

Suzanne Perry, Esq.
Dow, Lohnes, & Albertson
1255 - 23rd St., NW
Washington, DC 20037
Counsel for Multimedia WMAZ

Peter Tannenwald, Esq.
Irwin, Campbell & Tannenwald, PC
1320-18th St., NW Suite 400
Washington, DC 20036-1811
Counsel for Radio Telecom and Technology, Inc.
Counsel for Phonic Ear, Inc.

Dr. Michael C. Trahos, DO, NCE, CET
4600 King Street, Suite 6K
Alexandria, VA 22302

Jonathon D. Blake, Esq.
Covington & Burling
1201 Pennsylvania Ave., NW
Washington, DC 20044
Counsel for AMST


Paul Mahon